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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,582

03/31/2004

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07844-636001 / P589

8418

21876 7590 08/12/2008

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EXAMINER

CHOW, JEFFREY J

ART UNIT

PAPER NUMBER

2628

MAIL DATE

DELIVERY MODE

08/12/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,582	<b>Applicant(s)</b> ARNOLD ET AL.	
	<b>Examiner</b> Jeffrey J. Chow	<b>Art Unit</b> 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 10-13, 22-25 and 34-36 is/are rejected.
- 7) ☒ Claim(s) 2-9, 14-21 and 26-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/4/07, 5/8/08</u>   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 03 August 2007 have been fully considered but they are not persuasive.

Allowability of claims 1, 10, 13, 22, 25, and 34 has been withdrawn due to obvious double patenting rejections on US Patent No. 7,408,555 issued on 05 August 2008.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 10, 13, 22, 25, and 34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,408,555.

10/816,582 (Claim 1)	U.S. Patent No. 7,408,555 (Claim 2)
A method of rendering a glyph to make the glyph more readable, comprising	A method of asymmetrically adjusting a rendering of a glyph, comprising

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receiving a glyph associated with a font, the glyph to be rendered at a size,	receiving a glyph associated with a font, the glyph to be rendered at a size and having one or more strokes, each stroke having a first edge and a second edge,
calculating a set of initial density values to provide one density value for each of a set of device pixels to represent the glyph,	calculating the first initial adjustment value comprises (Claim 2) determining a first initial density value of device pixels along the first edge (Claim 2)
calculating an initial adjustment value for the glyph,	calculating a first initial adjustment value for the first edge of each stroke and a second initial adjustment value for the second edge of each stroke,
for one or more of the device pixels in the set of device pixels, calculating a length of an edge of the glyph that passes through the device pixel,	for one or more of the device pixels in the set of device pixels, calculating a length of an edge of a stroke that passes through the device pixel,
for one or more of the device pixels, adjusting the initial density value of the device pixel by a final adjustment value, the final adjustment value based upon the initial adjustment value and the length of the edge of the glyph passing through the device pixel, and	for each of the one or more device pixels, calculating a final adjustment value based on the length of an edge of a stroke passing through the device pixel and either the first or the second initial adjustment value depending on whether the edge is the first or the second edge of the corresponding stroke, and
providing a representation of the glyph on a display device.	(Intended use) adjusting the density values of the one or more device pixels by the corresponding final adjustment value.

Claim 2 of U.S. Patent No. 7,408,555 anticipates claims 1, 10, 13, 22, 25, and 34 of Application No. 10/816,582.

Claims 11, 23, and 35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 7,408,555.

10/816,582 (Claim 11)	U.S. Patent No. 7,408,555 (Claim 2)
A computer-implemented method, comprising	A method of asymmetrically adjusting a rendering of a glyph, comprising
receiving a plurality of glyphs to be	receiving a glyph associated with a

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rendered, where each glyph includes a respective glyph outline,	font, the glyph to be rendered at a size and having one or more strokes, each stroke having a first edge and a second edge, an outline of the glyph
for each glyph, using a scaled stem width of the glyph to select a rendering policy for rendering the glyph, where a rendering policy comprises a plurality of parameters for rendering the glyph including a hinting policy, and	determining the first initial adjustment value based on the scaled stem width and the first initial density value (claim 2)
where a rendering policy comprises a plurality of parameters for rendering the glyph including a hinting policy, and modifying the glyph outline in accordance with the hinting policy included in the selected rendering policy to generate a modified glyph outline,	calculating an offset amount, being an amount by which one or more strokes of the glyph will be offset from a device resolution grid when a high resolution representation of the glyph is rendered as compared to an original position of an outline of the glyph, such that a minimum number of device pixels will be marked by the one or more strokes after adjusting the density values of one or more device pixels representing the glyph,
the glyph outline and the modified glyph outline each comprising a respective closed path defined by a font program specifying a connected sequence of lines or curves or both, and	an outline of the glyph
for each glyph, before generating any raster representation of the glyph, using	rendering the high resolution representation of the glyph so that one or more edges of at least one stroke is offset from the device resolution grid by the offset amount, the high resolution representation representing a set of device pixels and determining an initial density value for each of said device pixels,
rasterizing the modified glyph outline and generating a raster representation of the glyph from the rasterized modified glyph outline in accordance with the selected rendering policy for presentation on a display device.	rendering the high resolution representation of the glyph so that one or more edges of at least one stroke is offset from the device resolution grid by the offset amount, the high resolution representation representing a set of device pixels and determining an initial density value for each of said device pixels, adjusting the density values of the one or more device pixels by the corresponding final adjustment value.

Claims 11, 23, and 35 of Application No. 10/816,582 are obvious over claim 2 of U.S. Patent No. 7,408,555 . Patent No. 7,408,555 infers selecting a rendering policy based on a scaled stem width, wherein a rendering policy is at least a hinting policy and have a plurality of parameters, because the offset amount and the initial adjustment values are hinting policies, wherein hinting policy is the modification of a glyph outline by translating the glyph outline relative to edges of pixels. U.S. Patent No. 7,408,555 does not claim the glyph outline and the modified glyph outline each comprising a respective closed path defined by a font program specifying a connected sequence of lines or curves or both, however U.S. Patent No. 7,408,555 does disclose glyph outlines being closed path and sequences of lines or curves or both (Figures 4, 6, and 9). It would have been obvious for one of ordinary skill in the art at the time of the inventing to modify the claimed invention of claim 11 of Application No. 10/816,582 to incorporate a glyph outline being a closed path with a sequences of lines or curves or both. One would be motivated to do so because these are basic forms in creating outlines, which are necessary to help build and understand complex outlines.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 12, 23, 24, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hassett et al. (US 5,301,267).

Regarding independent claim 11, Hassett teaches a computer-implemented method, comprising

receiving a plurality of glyphs to be rendered, where each glyph includes a respective glyph outline (column 5, lines 51 – 63 and column 6, lines 31 – 38: Type 1 fonts have outlines to be scaled),

for each glyph, before generating any raster representation of the glyph (Figure 5: Fill and Rasterize 118 step done last), using a scaled stem width of the glyph to select a rendering policy for rendering the glyph (column 11, line 51 – column 12, line 14: equations 1 – 4 determines how to shift the stems of the glyph), where a rendering policy comprises a plurality of parameters for rendering the glyph including a hinting policy (column 11, line 51 – column 12, line 14: the fractional part of the width of the stem determines adjustment of the width), and modifying the glyph outline in accordance with the hinting policy included in the selected rendering policy to generate a modified glyph outline (column 13, lines 25 – 42: adjustment to the  $Width_{DS}$  can be turned into movement of edges by apportioning the total  $\Delta_{width}$  between each edge), the glyph outline and the modified glyph outline each comprising a respective closed path defined by a font program specifying a connected sequence of lines or curves or both (Figures 6a, 6B and 7: letter "P" having straight lines and Bezier curves, forming closed paths), and

rasterizing the modified glyph outline and generating a raster representation of the glyph from the rasterized modified glyph outline in accordance with the selected rendering policy for presentation on a display device (Figure 5: Fill and Rasterize 118; Figure 6a: letter "P" adjusted using a hinting policy).

Regarding dependent claim 12, Hassett teaches a rendered glyph is represented by a plurality of device pixels (Figures 6a, 6b, and 7: letter "P" uses more than one device pixels), and wherein the selected rendering policy includes an initial adjustment value for adjusting initial density values of one or more of the plurality of device pixels (column 11, line 51 – column 12, line 14:  $\Delta_{width}$ ), the initial density values derived from the rasterizing of the modified glyph outline (column 8, lines 37 – 49: letter "P" in Figure 6a with unadjusted stroke widths uses 2.4 pixels as letter "P" in Figure 6b with adjusted stroke widths uses two pixels).

Regarding claims 23, 24, 35, and 36, claims 23, 24, 35, and 36 are similar in scope as to claims 11 and 12, thus the rejections for claims 11 and 12 hereinabove is applicable to claims 23, 24, 35, and 36.

#### ***Allowable Subject Matter***

Claims 2 – 9, 14 – 21, and 26 – 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



/Ulka Chauhan/  
Supervisory Patent Examiner, Art Unit 2628